GeoData Server Scripting Language (GDSL) Editor User Guide

Contents

Chapter 1. Introduction

GDSL Editor Functionality

The GDSL Editor allows you to:

1. Write GDSL Code
2. Validate GDSL Code for Proper Form
3. Encode GDSL Code for Keyhole Markup Language (KML) Transmittal

Chapter 2. Write GDSL Code

What is GDSL Code

GDSL Code Elements

GDSL is a simple scripting language consisting of:

- If/Else conditional statements
- And/Or boolean statements
- Assignment (=), comparison (>=, etc.) and mathematical (+, -, etc.) operators
- Output literals (Output.Red, Output.Green and Output.Blue)
- Data layer names. These are server-side image and data files (e.g. LandCover, ContinentalUSElevation)
- Variables
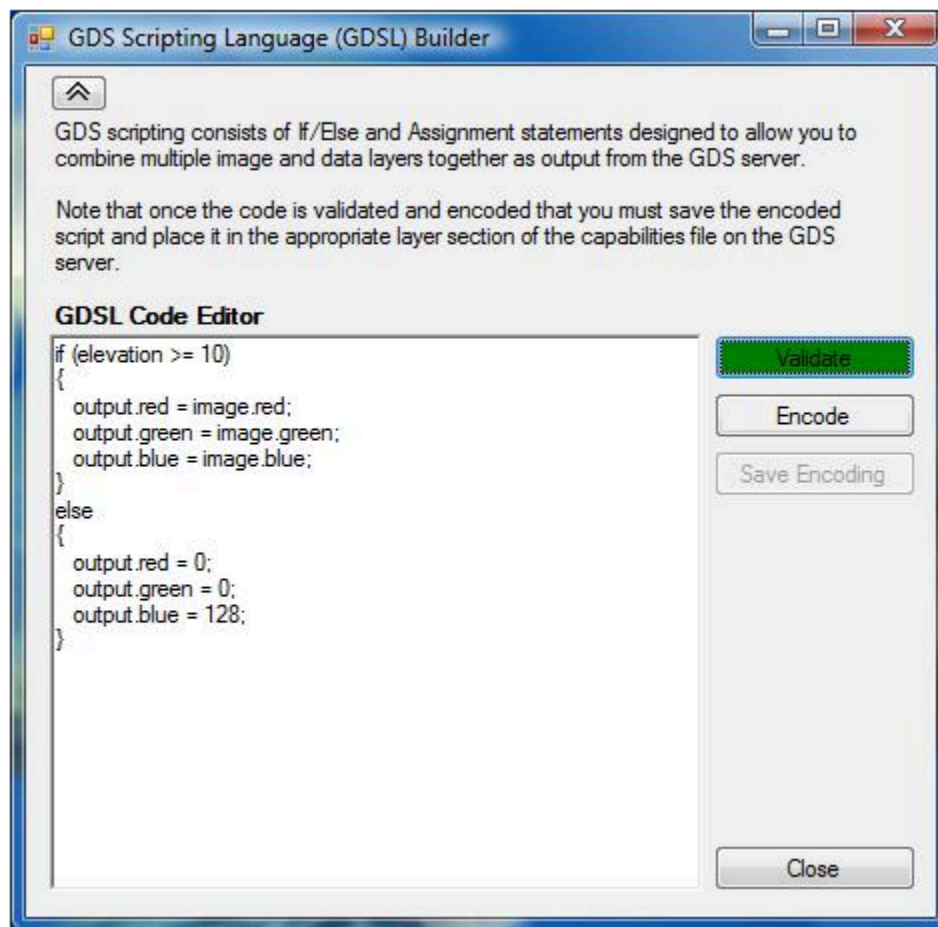
The screenshot above represents a combination of two different types of datasets (elevation and image) combined and evaluated using GDSL to form the output image sent to the client.

Chapter 3. Validate GDSL Code

What is Valid GDSL Code

How to write valid GDSL code

While GDSL is a simple scripting language, it gives users a lot of flexibility with authored image and data files. There are rules to writing valid GDSL code, however:

- If and Else are the only branching/conditional statements.
- There is no iteration or recursion as there are no 'for' or 'while' loops.
- There are no functions.
- All variables are global in scope.
- Braces must be used for any statements/expressions longer than one line.

```
if (ConUSElevation <= 3)

output.blue = 128;

else

{

output.red = ConUS.red;

output.green = ConUS.green;

output.blue = ConUS.blue;

}
```

Sample Valid GDSL program

Once you have entered GDSL code into the Editor, you click Validate to make sure it is well-formed and valid. If it is valid then the button's color will change to green and if not, the button's color will be red.

Chapter 4. Encode GDSL Code for KML Transmittal

Encoded GDSL

How to encode GDSL into a format for transmittal by http

Upon successful validation of the code:

- Click Encode, and if no error occurs, then the button's background color will change to green. This encodes the GDSL into a format that be transported via HTTP and KML.

- Click Save Encoding to copy the encoded GDSL to memory and then paste it into the Capabilities.kml file on the GDS server.